2002: The Year in Review

Introduction

The Office of Epidemiology conducts surveillance to track the incidence of infectious diseases in Utah. Surveillance is crucial to determining disease impact, assessing trends in disease occurrence, characterizing affected populations, prioritizing disease control efforts, and evaluating disease prevention strategies. It is also critical in understanding the health status of a population, planning effective prevention programs, and reducing morbidity and mortality. This report includes a brief overview of specific reportable infectious diseases of public health significance in the state during 2002. The report also includes rates of disease per 100,000 people in the Utah's population. The report provides the health care community, government and regulatory agencies, and other concerned individuals and groups, with important data on Utah's reportable diseases and conditions. Only data on cases that are reported to the Office of Epidemiology and meet the confirmed status category for a case definition are included in this summary, unless specified otherwise.

Enteric Diseases

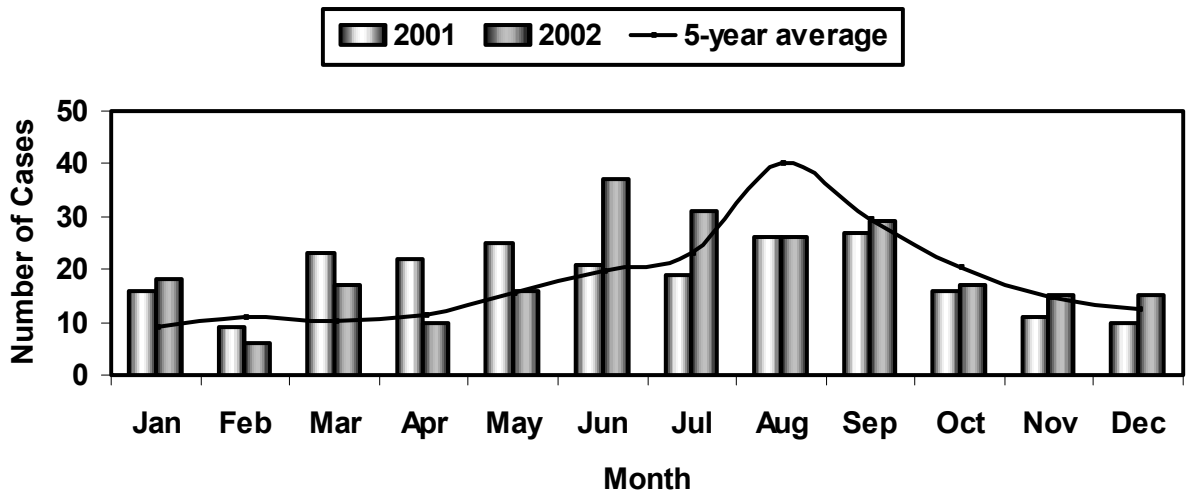
The 252 **campylobacteriosis** cases (rate = 11.2) reported in 2002 represented an 11% increase in the number of cases (228, rate = 10.2) reported in 2001 (see Figure 1). Sixteen (6%) cases reported unpasteurized milk consumption. Raw milk consumption was responsible for one outbreak in January involving 5 individuals from the same rural county. The affected individuals reported consuming unpasteurized milk from the same source. The Office of Epidemiology also noted an increase in cases reported in June and July, but found no common source of infection.

The number of reported ***Escherichia coli O157:H7*** infections had the most profound effect on the increased enteric disease rates in 2002. The number of reported infections more than doubled in one year, increasing from 35 (rate = 1.6) in 2001, to 77 (rate = 3.4) in 2002. Several clusters of infections were identified in the state through pulsed-field gel electrophoresis analysis. While secondary person-to-person transmission was noted in some clusters, no original source of infection was identified. Unlike *E. coli O157:H7* infections, the number of reported ***non-O157:H7*** **Shiga toxin-producing *E. coli*** infections decreased from 28 (rate = 1.3) reported in 2001 to 18 (rate = 0.8) reported in 2002.

The number of **giardiasis** cases (335, rate = 14.9) reported in 2002 was also elevated, by 18%, from the number (284, rate = 12.6) reported in 2001.

The number of **salmonellosis** cases have continued to decline each year since 1999 when 568 cases (rate = 32.7) were reported, including 70 cases that were associated with an outbreak involving the consumption of homemade ice cream prepared with

Figure 1. Reported Campylobacteriosis Cases by Month, Utah, 2001-2002 (including a 5-year average, Utah, 1997-2001)



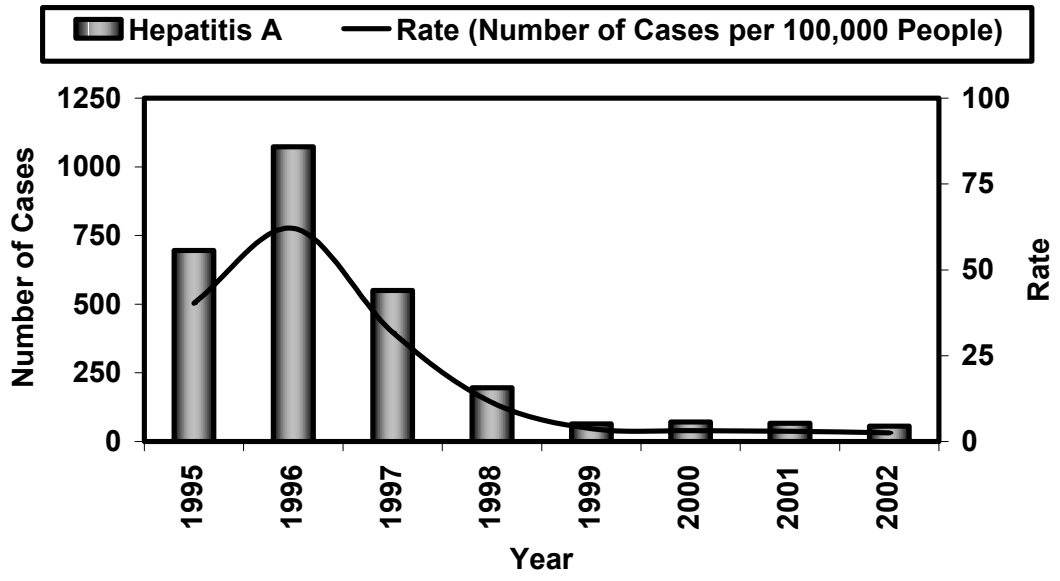
unpasteurized eggs. Only 185 cases (rate = 8.2) were reported in 2002, less than one-third the number reported three years prior. Forty-four different serotypes were identified among the cases, including two serotypes that accounted for 67% of the cases. *Salmonella enteritidis* was the most common serotype identified, infecting 40 (34%) of the cases, followed by *Salmonella typhimurium*, which infected 39 (33%) of the cases.

Like salmonellosis, the number of **shigellosis** cases also decreased in 2002, compared to 2001. The reported cases dropped 56%, from 63 cases (rate = 1.6) reported in 2001, to 35 cases (rate = 2.8) last year.

Viral Hepatitis

Utah has continued its notable decline in the number of **hepatitis A** cases reported. Disease rates peaked in 1996 with 1073 cases (rate = 62.0) and have steadily declined since (see Figure 2). In 2002, only 56 cases (rate = 2.5) were reported, resulting in a 15% reduction compared to 2001, a year that also experienced a decrease (7%) in reported cases compared to the previous year. No known outbreaks occurred that were associated with infected foodhandlers or daycare centers.

Figure 2. Reported Hepatitis A Cases by Year, Utah, 1995-2002 (including Hepatitis A Rates by Year, Utah, 1995-2002)



Unlike hepatitis A, the number of reported **hepatitis B** cases more than doubled in 2002 compared to 2001. Hepatitis B cases increased from 25 (rate = 1.1) reported in 2001 to 53 (rate = 2.4) reported in 2002. Of these cases, 59% were male and 32% were between the ages of 20 and 39. During 2002, 46 pregnant women with hepatitis B were identified statewide, an increase of 40% over the number (33) of cases reported in 2001.

Four acute **hepatitis C** cases (rate = 0.2) were reported that had sufficient criteria to meet the Centers for Disease Control and Prevention's case definition for an acute case. The Office of Epidemiology maintains a database of patients reported with positive hepatitis C antibody tests. These tests do not differentiate between acute and chronic infections and most reports lacked the additional information necessary to determine acute infectivity.

No **hepatitis D** or **hepatitis E** cases were reported during the year.

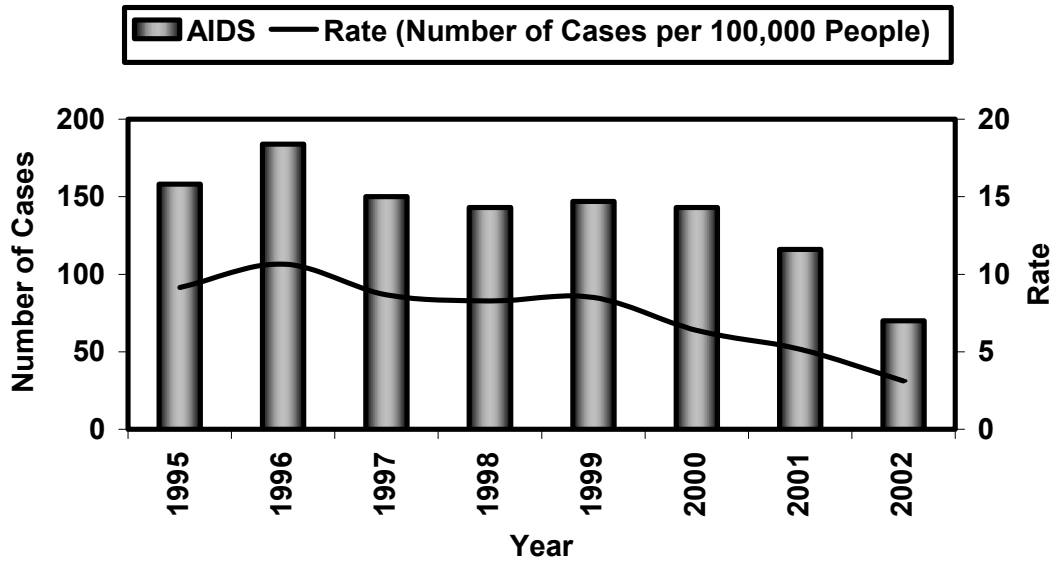
We urge health care providers to test individuals presenting with hepatitis rather than relying on a clinical diagnosis.

HIV/AIDS

The 70 AIDS cases (rate = 3.1) reported in 2002 represent a 40% decrease from the

116 cases (rate = 5.2) reported in 2001 (see Figure 3). The 26 AIDS deaths (rate = 1.1) reported through December 2002 represent a 4% decrease from the previous year. Sixty-five HIV positive individuals (rate = 2.8) were reported during 2002, a 33% increase from the 49 (rate = 2.1) reported in 2001. The decrease in number of AIDS cases and AIDS-related deaths is likely due to effective antiretroviral treatment.

Figure 3. Reported AIDS Cases by Year, Utah, 1995-2002 (including AIDS Rates by Year, Utah, 1995-2002)

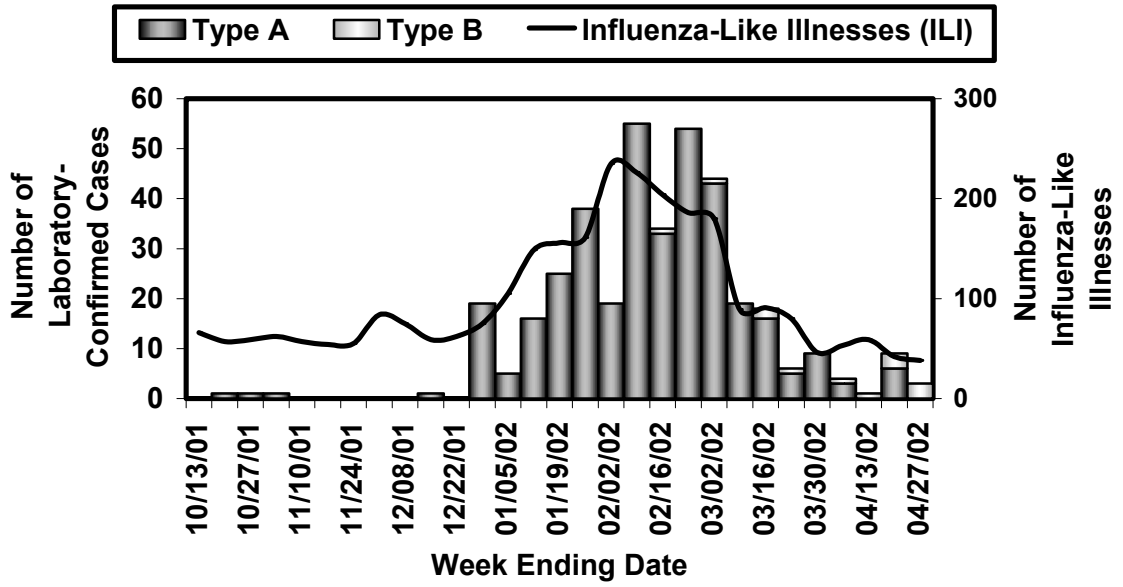


During 2002, 63% of HIV-positive individuals and 57% of AIDS cases were in the age group 20-39. Of the 135 individuals reported with HIV/AIDS in 2002, 114 (84%) were male and 21 (16%) were female. During 2002, male-to-male sexual contact was the most common means of HIV/AIDS exposure reported among men of all races, while injecting drug use remained the second highest means of exposure. Cumulative data show injecting drug use and heterosexual contact with an injecting drug user accounted for 61% of HIV/AIDS among women in Utah.

Influenza

Surveillance for influenza is typically tracked by season rather than calendar year. For the 2001-2002 season, healthcare providers statewide significantly increased influenza testing and reporting, enhancing the capacity to detect novel viruses during the 2002 Winter Olympic Games. There were 409 laboratory-confirmed influenza cases (rate = 17.6) reported among Utah residents from September 2001 through July 2002 (see Figure 4). Of those, 372 (91%) were type A (141 were antigenic strain H3N2) and 37

Figure 4. Influenza Surveillance by Week, Utah, October 2001 - April 2002



(9%) were type B. The majority, 359 (88%), was under the age of 18 years. Sentinel providers collected clinical specimens during the Olympics to monitor disease activity in communities with Olympic venues. These specimens accounted for 28 (6%) of the cases in Utah residents. An additional 47 laboratory-confirmed cases were identified in non-residents seen at special clinics set up for Olympic athletes and officials.

Meningitis

Meningococcal disease cases (5, rate = 0.2) reported in 2002 decreased 38% from the previous year. These cases were fairly evenly distributed throughout the year with no outbreaks identified. Isolates identified in 2002 cases included *Neisseria meningitidis* serogroup C (2), serogroup Y (2), and serogroup unknown (1).

There were 20 confirmed cases (rate = 0.9) of **bacterial meningitis** reported during 2002, representing only half the number reported in 2001. The etiologic agents included *Citrobacter sp.* (1), *Coccidioides immitis* (1), *Cryptococcus neoformans* (2), *Enterobacter cloacae* (1), *Escherichia coli* (4), *Pseudamonas sp.* (1), *Staphylococcus aureus* (2), *Streptococcus bovis (1),* Group A *Streptococcus (1), Group C Streptococcus (1), and Streptococcus pneumoniae* (5).

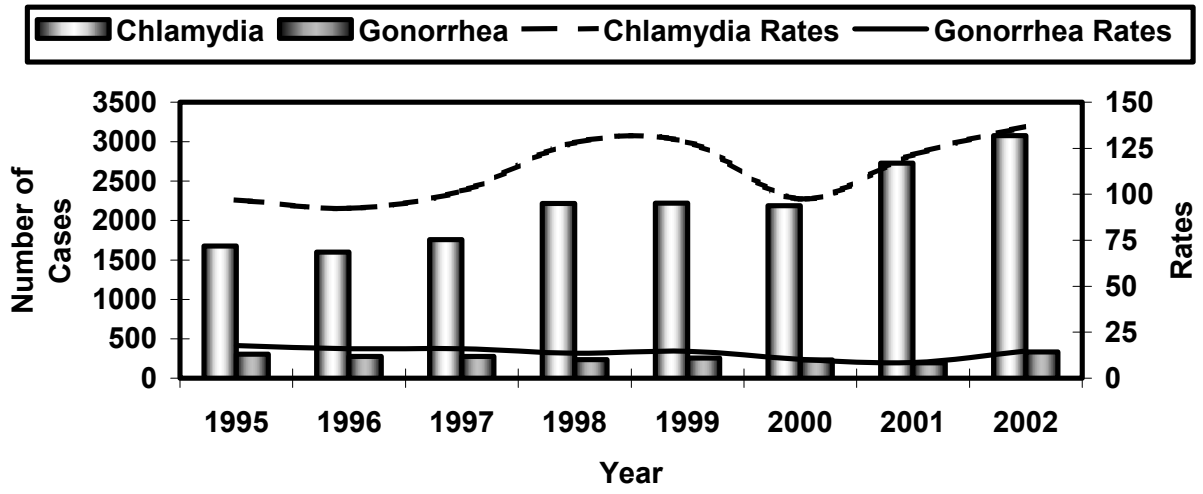
The number of reported **viral meningitis** cases increased from 75 cases (rate = 3.3) in

2001 to 118 (rate = 5.3) in 2002. While an etiology was not established for 41% of cases, enteroviral infections were confirmed in 69 (58%) cases and a Herpes simplex infection was confirmed in 1 (0.8%) of the cases. No West Nile virus infections have been reported in Utah through 2002. However, the increased number of viral meningitis cases reported in 2002 may be due, in part, to enhanced West Nile virus surveillance activities which have resulted in more testing and better reporting of viral meningitis cases.

Sexually Transmitted Diseases

There were 3,078 cases (rate = 137.0) of **chlamydia** reported in 2002, representing a 13% increase over the 2,730 reported cases (rate = 121.5) of 2001 (see Figure 5). The number of reported **gonorrhea** cases increased substantially from 2001 to 2002. There were 334 cases (rate = 14.9) reported during 2002, a 73% increase compared to the 193 cases (rate = 8.6) reported in 2001. Eight **syphilis** cases (rate = 0.4) were reported during the year compared with 10 (rate = 0.5) in 2001.

Figure 5. Reported Chlamydia and Gonorrhea Cases by Year, Utah, 1995-2002 (including Chlamydia and Gonorrhea Rates by Year, Utah, 1995-2002)



Tuberculosis

There were 31 active cases (rate = 1.4) of tuberculosis (TB) that were reported in Utah during 2002, an 11% decrease from the 35 cases (rate = 1.6) reported in 2001. The

percentage of TB cases among homeless persons continued to decrease – from 14% (5 of 35) in 2001 to nearly 10% (3 of 31) in 2002. Foreign-born individuals continued to be disproportionately at an increased risk for the disease with 68% of the cases being refugees, immigrants, and migrants who were born outside the United States. During 2002, 42% of the reported cases (13 of 31) included extrapulmonary sites as compared to 34% in 2001.

Vaccine-Preventable Diseases

There were 20 reported cases (rate = 0.9) of ***Haemophilus influenzae*** infections in 2002, double the number reported in 2001. Eight (40%) of the 20 cases had non-typeable isolates. Type B was confirmed in 3 (15%) of the cases.

No confirmed **measles** cases have been reported in Utah since 2000. However, there was an extensive investigation of a probable case that tested positive for measles IgM antibodies, but had no documented exposure or travel history. Subsequent laboratory test results were inconclusive and no further cases were identified.

There were 7 cases (rate = 0.3) of **mumps** reported in 2002, compared to 1 (rate = 0.04) reported in 2001. There were no cases of rubella documented throughout the year. In fact, no cases of rubella have been reported in Utah since 1999.

One-hundred fifteen confirmed and probable **pertussis** cases (rate = 5.1) were reported in 2002, a 57% increase over the previous year (see Figure 6). Forty-four (38%) of the cases were associated with an outbreak in Washington County that lasted from May 2002 to August 2002. Seventeen percent (20) of the cases reported in 2002 were hospitalized, including 11 children aged 2 or under.

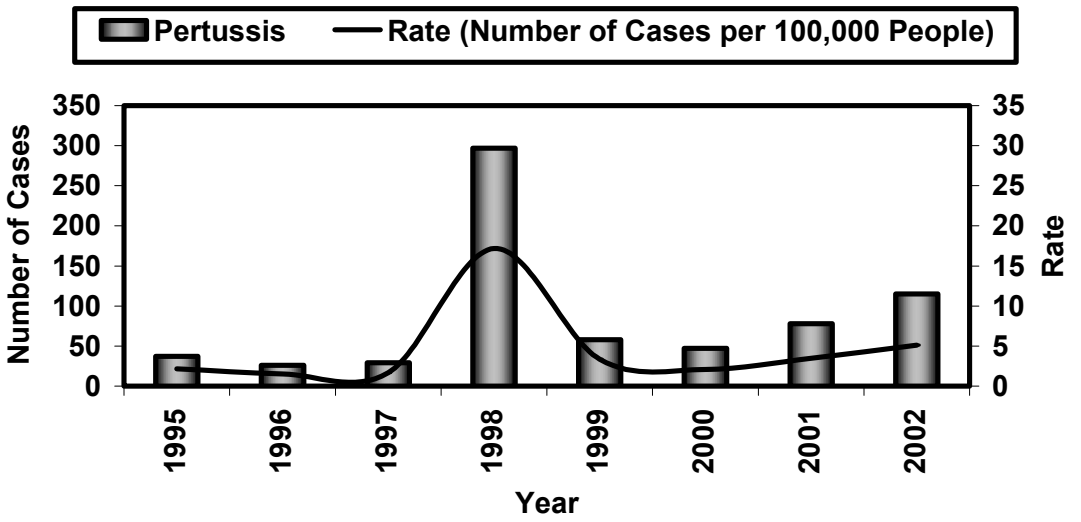
Vectorborne and Zoonotic Diseases

In 2002, 540 animals were submitted for rabies testing, including 78 bats. A total of 13 bats (17% of those submitted) tested positive for the disease, compared to 15 that tested positive during 2001. Rabid bats were identified in the following counties: Cache (23%), Davis (15%), Emery (8%), Salt Lake (31%), Sanpete (8%), and Utah (15%). No other animals tested positive for the disease.

There were 4 reported cases (rate = 0.2) of **hantavirus pulmonary syndrome** during 2002, including 1 fatality. The 4 cases were reported from the following counties: Duchesne, Iron, Salt Lake, and Wayne.

No cases of **Rocky Mountain Spotted Fever** were reported in 2002. However, 3 cases (rate = 0.1) were reported in 2001. One case (rate = 0.04) of **Colorado Tick Fever** was

Figure 6. Reported Pertussis Cases by Year, Utah, 1995-2002 (including Pertussis Rates by Year, Utah, 1995-2002)



reported in 2002. Five cases (rate = 0.2) of **Lyme disease** were reported in 2002, compared to only 1 (rate = 0.04) reported in 2001. The disease is not endemic in Utah and was likely acquired during travel to endemic areas.

A total of 6 cases (rate = 0.3) of imported **malaria** and 1 case (rate = 0.04) of **tularemia** were reported in 2002. No cases of human plague were reported during the year.

Other Reportable Diseases

There were 16 reported cases (rate = 0.7) of **legionellosis** during 2002, more than double the number reported in 2001. Three cases (rate = 0.1) of **listeriosis** were reported in 2002, compared to 2 cases (rate = 0.1) reported in 2001. There were 3 cases (rate = 0.1) of **Toxic Shock Syndrome** and 3 cases (rate = 0.1) of **Streptococcal Toxic Shock Syndrome** reported in 2002, compared to 0 and 2 cases reported the previous year, respectively. There were also 3 cases (rate = 0.1) of **infant botulism** reported during the year, compared to 4 reported during 2001.

The Office of Epidemiology expresses gratitude to laboratory personnel, physicians' offices, local health departments, schools and nursing homes, whose required reports are the basis of this summary. Reporting of notifiable diseases to the health department is the backbone of disease surveillance in Utah and the nation and becomes increasingly important as emerging infectious diseases are gaining greater public attention. In

addition, prompt surveillance reports allow outbreaks to be recognized in a more timely fashion, when control measures are likely to be most effective in preventing additional cases. The Communicable Disease Rule was revised is available on-line at http://health.utah.gov/els/epidemiology/comdisease.html or may be obtained from the Office of Epidemiology, 801-538-6191.

Important Information!

When Reporting a Communicable Disease:
Call (801) 538-6191 or
Call toll free (24 hours) 1-888-EPI-UTAH (374-8824) or
Fax (801) 538-9923